

CLAIMS

1. Process for treatment of hydrocarbon fractions of regenerative reforming type, using a series of at least two reactors, forming the reaction zone, whereby the feedstock and the intermediate effluents pass through the reactors in succession and each reactor operates in a moving bed, the process having a regeneration zone that makes it possible to eliminate the coke that is deposited on the catalyst during reactions, and the process being characterized in that the regenerated catalyst that is obtained from said regeneration zone directly supplies at least two reactors of the series starting from a common distribution zone, is collected at the outlet of the reaction zone in a mixing zone where it is homogenized and, at the outlet of this mixing zone, is brought into the regeneration zone.
2. Process according to claim 1, comprising 4 reactors that are arranged in series.
3. Process according to claim 1 or 2, wherein each of the reactors of the series is supplied directly by the regenerated catalyst that is obtained from the regeneration zone.
4. Process according to claim 2, wherein the regenerated catalyst supplies the first and the third reactors of the series, whereby the numbering is done in the order that the feedstock and intermediate effluents pass through, whereby the second reactor of the series is supplied by the catalyst that is obtained from the first reactor of the series, and whereby the fourth reactor is supplied by the catalyst that is obtained from the third reactor of the series.

5. Process according to claim 2, wherein the regenerated catalyst supplies the first and the fourth reactors of the series, whereby the numbering is done in the order that the feedstock and intermediate effluents pass through, whereby the second reactor of the series is supplied by the catalyst that is obtained from the first reactor of the series, and whereby the third reactor of the series is supplied by the catalyst that is obtained from the second reactor of the series.
6. Process according to claim 2, wherein the regenerated catalyst supplies each of the four reactors, and the collecting of the spent catalyst is carried out by a group of two reactors.
7. Process according to any of claims 1 to 6, wherein the operating pressure is less than 0.3 MPa absolute.
8. Process according to any of claims 1 to 7, wherein the H₂/HC molar ratio is less than 2.
9. Process according to one of claims 1 to 8, wherein the volumetric flow rate is greater than 2 h⁻¹.
10. Process according to any of claims 1 to 9, wherein the gas that is used for the combustion phase of the coke that is deposited on the catalyst in the regeneration zone is the instrument air.
11. Process according to any of claims 1 to 10, wherein the reactors that form the series of reactors are placed side by side.
12. Process according to any of claims 1 to 11, wherein the reactors that form the series of reactors are stacked vertically on one another.

13. Application of the process according to any of claims 1 to 12 to processes of aromatization or dehydrogenation of normal paraffins.